State of Nevada
Department of Administration – State Public Works Division
Buildings and Grounds Section
Marlette Lake Water System Office
Facility Condition Analysis

MARLETTE LAKE WATER SYSTEM OFFICE

5400 North Carson Street
Carson City, Nevada 89701

Site Number: 9899
STATE OF NEVADA PUBLIC WORKS DIVISION
FACILITY CONDITION ANALYSIS

Report Printed in August 2015

State of Nevada
Department of Administration – State Public Works Division
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The Facility Condition Analysis Program was created under the authority found in NRS 341.128. The State Public Works Division develops this report using cost estimates based on contractor pricing which includes materials, labor, location factors and profit and overhead. The costs of project design, management, special testing and inspections, inflation and permitting fees are not included. Cost estimates are derived from the R.S. Means Cost Estimating Guide and from comparable construction costs of projects completed by SPWD project managers.

The deficiencies outlined in this report were noted from a visual survey. This report does not address routine maintenance needs. Recommended projects do not include telecommunications, furniture, window treatments, space change, program issues, or costs that could not be identified or determined from the survey and available building information. If there are buildings without projects listed, this indicates that only routine maintenance needs were found. This report considers probable facility needs for a 10 year planning cycle.

This report is not a guarantee of funding and should not be used for budgeting purposes. This report is a planning level document for agencies and State Public Works Division to assess the needs of the Building and/or Site and to help support future requests for ADA upgrades / renovations, Capital Improvement Projects and maintenance. The final scope and estimate of any budget request should be developed by a qualified individual. Actual project costs will vary from those proposed in this report when the final scope and budget are developed.

Establishing a Facility Condition Needs Index (FCNI) for each building

The FCA reports identify maintenance items and establish construction cost estimates. These costs are summarized at the end of the report and noted as construction costs per square foot. A FCNI is commonly used by facility managers to make a judgment whether to recommend whole replacement of facilities, rather than expending resources on major repairs and improvements. The FCNI is a ratio between the proposed facility upgrade costs and facility replacement costs (FRC). Those buildings with indices greater than .50 or 50% are recommended to be considered for complete replacement.

Class Definitions

PRIORITY CLASS 1 - Currently Critical (Immediate to Two Years)

Projects in this category require immediate action to return a facility to normal operation, stop accelerated deterioration, correct a fire/life safety hazard, or correct an ADA requirement.

PRIORITY CLASS 2 - Necessary - Not Yet Critical (Two to Four Years)

Projects in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

PRIORITY CLASS 3 - (Four to Ten Years)

Projects in this category include items that represent a sensible improvement to existing conditions. These items are not required for the most basic function of a facility; however, Priority 3 projects will either improve overall usability and/or reduce long-term maintenance.

Site number: 9899

Facility Condition Needs Index Report

Index #	Building Name	Sq. Feet	Yr. Buil	Survey Date	Cost to Repair: P1	Cost to Repair: P2	Cost to Repair: P3	Total Cost to Repair	Cost to Replace	FCNI
2488	MARLETTE LAKE OFFICE / STORAGE BUILDING	2400	1986	2/25/2015	$35,400	$107,800	$3,500	$146,700	$360,000	41%
	5400 North Carson Street Carson City									
2498	WATER MASTER HOUSE SHED	120	1992	2/25/2015	$0	$2,400	$600	$3,000	$12,000	25%
	5400 North Carson Street Carson City									
2484	LAKEVIEW HOUSE	2300	1873	2/25/2015	$11,000	$0	$23,000	$34,000	$575,000	6%
	5400 N. Carson Street Carson City									
9899	MARLETTE LAKE WATER SYSTEM OFFICE SITE		0	2/25/2015	$0	$282,800	$65,000	$347,800		0%
	5400 North Carson Street Carson City									
3031	GENERATOR BUILDING	952	2009	11/10/2009	$0	$0	$0		$1,600,000	
	5400 North Carson Street Carson City									
	Report Totals.....:	**5,772**			**$46,400**	**$393,000**	**$92,100**	**$531,500**	**$2,547,000**	**21%**

Table of Contents

MARLETTE LAKE WATER SYSTEM OFFICE SITE

BUILDING REPORT

The Marlette Lake site is located between Carson City and Washoe County, West of US 395. The site is approximately 3 acres. There are three buildings on the site; the Lakeview House, also known as the Water Master House, a shed, and an office/storage building. The house is located on the eastern edge of the site, the shed is 100 feet West of the house, and the office/storage building on the western edge of the site. There are two entrances, one is by the house accessed from North Carson Street, and the other is next to the office/storage building.
The Lakeview House, built in 1873 was home to the Water Master that monitored the water supply line to Virginia City. The small office inside the office/storage building currently houses the computer / software system that monitors this system.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $282,800**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 9899SIT5

ASPHALT PAVING INSTALLATION

Construction Cost $217,800

The site has several areas with inadequate drainage due to erosion and clogged drains. A majority of the site is not paved allowing runoff to erode the dirt. Installing asphalt and drainage swales would allow for control of the runoff and prevention of flooding. This project would provide asphalt cement paving for the dirt areas of the site. The estimate includes grading, 6" base, compaction and installation of 4" thick asphalt cement paving.

Project Index #: 9899SIT4

CRACK FILL & SEAL ASPHALT PAVING

Construction Cost $9,000

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and sealing of the paving site wide including access roads and parking areas. Striping is included in this estimate. This project should be scheduled on a 5 year cyclical basis to maintain the integrity of the paving and prevent premature failure. 15,000 square feet of asphalt area was used to generate this estimate.

Project Index #: 9899SIT2

FENCE REPLACEMENT

Construction Cost $56,000

The Marlette Lake site has several types of fencing surrounding the perimeter, all of which are in poor condition. Some sections are completely missing or have been blown down by the wind. This project recommends the installation of a 6 foot high 6 gauge wire perimeter chain link fence around the entire site with two 14 foot wide gates with hardware. The cost estimate also includes demolition and disposal of the existing fence. An agency approval of fencing design and/or material may be required and is not reflected in this project.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $65,000**

Long-Term Needs **Four to Ten Years**

Project Index #: 9899SEC1

EXTERIOR SOLAR SITE LIGHTING INSTALLATION

Construction Cost $65,000

There is no site lighting for the property which is a security and safety concern. This project would provide for the installation of 10 solar powered LED exterior light fixtures, 20 foot tall poles and 30" diameter raised concrete bases. This installation will eliminate the need for trenching and electrical connections.

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**
Priority Class 2:	**$282,800**
Priority Class 3:	**$65,000**
Grand Total:	**$347,800**

WATER MASTER HOUSE SHED

BUILDING REPORT

The Water Master House shed is located just West of the Marlette House. The shed is a wood framed structure with wood siding to match the house. It has a concrete foundation, slab-on-grade floor, and asphalt composition roofing.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $2,400**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2498SIT1

CONCRETE REPLACEMENT **Construction Cost $2,400**

The concrete slab-on-grade in the shed is deteriorating. Spalling and cracking have occurred. Exposure to the weather is a contributing factor. This project addresses removal and replacement of the existing concrete slab. 120 SF of 4" thick concrete was used for this estimate.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $600**

Long-Term Needs **Four to Ten Years**

Project Index #: 2498EXT2

EXTERIOR FINISHES **Construction Cost $600**

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is sanding, priming and painting and caulking of the flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 5-7 years and that this project is scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

BUILDING INFORMATION:

Gross Area (square feet):	**120**
Year Constructed:	**1992**
Exterior Finish 1:	**100 % Painted Wood Siding**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % U**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Wood Framing**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$25.00**
Priority Class 2:	**$2,400**	**Total Facility Replacement Construction Cost:**	**$12,000**
Priority Class 3:	**$600**	**Facility Replacement Cost per Square Foot:**	**$100**
Grand Total:	**$3,000**	**FCNI:**	**25%**

MARLETTE LAKE OFFICE / STORAGE BUILDING

BUILDING REPORT

The Marlette Lake office / storage building is a prefabricated metal building with insulation on the walls only. There is a 200 square foot, wood framed office area with a unisex restroom. The computer controlled water delivery system for the Marlette Lake Water System is located inside the office. The walls and ceiling in the office are painted gypsum board. The building lacks fire protection and does not have a security system. The metal building is in fair condition except for the roof, which leaks due to damaged metal roof panels.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $35,400**

Currently Critical **Immediate to Two Years**

Project Index #: 2488ENR2

EXIT SIGN AND EGRESS LIGHTING INSTALLATION

Construction Cost $6,000

The building does not have any emergency lighting and the exit signs do not meet current standards. This project would provide for the purchase and installation of self-illuminated or LED style exit signs with battery-backed internal systems as well as emergency egress lighting to provide illumination along the egress route. IBC - 2012 Chapter 10 was referenced for this project.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488SFT3

NONABSORBENT FINISHES

Construction Cost $3,000

2012 IBC Section 1210 requires the installation of smooth, hard, nonabsorbent surfaces in the following restroom areas: on floors in toilet, bathing and shower rooms that extend upward onto the walls at least 4 inches, within 2 feet of the sides of urinals and water closets to a height of not less than 4 feet above the floor and in shower compartments to a height not less than 70 inches above the drain inlet. Accessories such as grab bars, towel bars, paper dispensers and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture. This project recommends the installation of Fiberglass Reinforced Panel (FRP) or an equal material to comply with this code section.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488SFT2

SAFETY CABINETS

Construction Cost $10,000

The storage building contains gasoline, aerosol cans and other hazardous products on open shelves and on the floor. This does not meet OSHA standards for hazardous materials containment. This project would provide two hazardous storage containers in the building and install placards on the building exterior in accordance with OSHA 1910.106 (d).
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488SFT5

SEISMIC GAS SHUT-OFF VALVE INSTALLATION

Construction Cost $4,000

This project would provide for the installation of a seismic gas shut-off valve on the main gas service piping just prior to entering the building. This estimate is based on the manufacturer Pacific Seismic Products or approved equal, equipped with the optional Model MS remote monitoring switch (to be interfaced with the direct digital control system and/or with an audible alarm). The gas piping immediately adjacent to the seismic gas valve shall be secured to the building utilizing unistrut channel bracing.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488ADA2

UNISEX ADA RESTROOM **Construction Cost $12,400**

The building does not have an ADA accessible restroom. The existing restroom does not meet the Americans with Disabilities Act (ADA) requirements. A complete retrofit is necessary. This project would provide funding for construction of a unisex accessible restroom. These items may include a new sink, toilet, hardware, mirrors, fixtures, flooring and paint. Relocation of the water heater is also part of this project. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards For Accessible Design were used as a reference for this project.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $107,800**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2488EXT3

EXTERIOR FINISHES **Construction Cost $2,400**

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 3-4 years and that this project is scheduled on a cyclical basis to maintain the integrity of the structure.

Project Index #: 2488HVA1

HVAC EQUIPMENT REPLACEMENT **Construction Cost $36,000**

The existing HVAC system consists of a wall mounted air conditioner and a wall mounted heater for the office along with an older ceiling mounted heater for the warehouse area. The electric heaters are inefficient and should be replaced with natural gas fired heaters. This project would provide for replacing the existing equipment with exterior ground mounted packaged units that provide natural gas fired heating as well as air conditioning.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488INT1

INTERIOR FINISHES **Construction Cost $1,000**

The interior finishes are in fair condition. It is recommended to paint the interior walls and ceilings of the office and restroom at least once in the next 2-3 years and that this project is scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488INT2

INTERIOR WALL UPGRADE **Construction Cost $24,000**

The interior walls have open framing with exposed batt insulation between the steel framing. It is recommended to install gypsum board to the interior walls along with taping, texturing and painting. There are public presentations held in this building and the exposed insulation is ripped and falling out in some places. This upgrade will improve the insulating properties of the building and provide a more finished look for the staff and visitors.

Project Index #: 2488ENR1

LIGHTING REPLACEMENT **Construction Cost $3,600**

The existing lighting fixtures are the older fluorescent type, and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. F28 T-8 lamps with electronic ballasts are suggested. Occupancy sensors will be installed in the restroom, office and other low occupancy areas for additional savings. Any electrical wiring upgrades are not included in this estimate.

Project Index #: 2488EXT1

ROOF REPLACEMENT **Construction Cost $28,800**

The standing seam metal roof on this building was in poor condition at the time of the survey and had active leaks. It is recommended that this building be re-roofed in the next 2-3 years with a new single-ply roofing system which will be installed directly over the existing metal roof. This will allow the roof to qualify for the statewide roofing program warranty and preventative maintenance agreement.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2488SEC1

SECURITY SYSTEM INSTALLATION **Construction Cost $12,000**

The existing office storage building currently does not have a security system installed. Because the small office area contains the computer-controlled water distribution system for Virginia City, a security system is recommended. This project recommends motion detection, door switches, access control and related items be installed and interfaced with the fire alarm.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $3,500**

Long-Term Needs **Four to Ten Years**

Project Index #: 2488PLM1

WATER HEATER REPLACEMENT **Construction Cost $3,500**

There is a 40 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 5-6 years. It is recommended that a new gas-fired water heater be installed for more efficient use of energy. This estimate includes: 100 feet of gas pipe, fittings, couplers, and labor for installation. Removal and disposal of the existing equipment is included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	**2,400**
Year Constructed:	**1986**
Exterior Finish 1:	**100 % Metal Siding**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**95 % S-2**
IBC Occupancy Type 2:	**5 % B**
Construction Type:	**Engineered Metal Building**
IBC Construction Type:	**II-FR**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$35,400**	**Project Construction Cost per Square Foot:**	**$61.13**
Priority Class 2:	**$107,800**	**Total Facility Replacement Construction Cost:**	**$360,000**
Priority Class 3:	**$3,500**	**Facility Replacement Cost per Square Foot:**	**$150**
Grand Total:	**$146,700**	**FCNI:**	**41%**

LAKEVIEW HOUSE

BUILDING REPORT

The Lakeview House, constructed in 1873 is a historical building also known as the Water Master House. This building is currently listed on the National Register of Historical Places. The house is located between Carson City and Washoe Valley, West of U.S. Highway 395. The residence is a two story structure with a wrap around front porch, asphalt composition roof and rests on an unreinforced native stone foundation. The State currently offers the house for lease to the general public.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $11,000**

Currently Critical **Immediate to Two Years**

Project Index #: 2484SFT2

EXTERIOR STAIR HANDRAIL INSTALLATION **Construction Cost $5,000**

The exterior stairs and wrap around porch are lacking handrails and guardrails as required in section R311.7.8 of the 2012 International Residential Code. This project would provide for wood framed handrails and guardrails to be installed in accordance with the code. This project is contingent upon the approval of the State Historic Preservation Office.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

Project Index #: 2484SFT4

SEISMIC GAS SHUT-OFF VALVE INSTALLATION **Construction Cost $4,000**

This project would provide for the installation of a seismic gas shut-off valve on the main gas service piping just prior to entering the building. This estimate is based on the manufacturer Pacific Seismic Products or approved equal, equipped with the optional Model MS remote monitoring switch (to be interfaced with the direct digital control system and/or with an audible alarm). The gas piping immediately adjacent to the seismic gas valve shall be secured to the building utilizing unistrut channel bracing.

Project Index #: 2484SFT1

SMOKE ALARM INSTALLATION **Construction Cost $2,000**

Section 907.2.11 of the 2012 IBC and 2012 IFC explains the requirements for smoke alarms in dwelling units including installing and maintaining smoke alarms in each sleeping room and on the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms. State Fire Marshal NAC 477.915 (3) requires that smoke detectors be connected to the wiring of the building with a battery backup. This project would provide funding for the purchase and installation of smoke alarms in accordance with these codes.
This project or a portion thereof was previously recommended in the FCA report dated 02/18/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/25/2015.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $23,000**

Long-Term Needs **Four to Ten Years**

Project Index #: 2484EXT4

EXTERIOR FINISHES **Construction Cost $11,500**

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is sanding, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 5-7 years and that this project is scheduled on a cyclical basis to maintain the integrity of the structure.

Project Index #: 2484INT2

INTERIOR FINISHES **Construction Cost $11,500**

The interior finishes are in fair condition. It is recommended to paint the interior walls and ceilings at least once in the next 5-6 years and that this project is scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

BUILDING INFORMATION:

Gross Area (square feet):	**2,300**
Year Constructed:	**1873**
Exterior Finish 1:	**100 % Painted Wood Siding**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**2 Basement? Yes**
IBC Occupancy Type 1:	**100 % R-3**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Wood Frame**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$11,000**	**Project Construction Cost per Square Foot:**	**$14.78**
Priority Class 2:	**$0**	**Total Facility Replacement Construction Cost:**	**$575,000**
Priority Class 3:	**$23,000**	**Facility Replacement Cost per Square Foot:**	**$250**
Grand Total:	**$34,000**	**FCNI:**	**6%**

NOTES:

The deficiencies outlined in this report were noted from a visual survey. The costs do not represent the cost of a complete facility renovation or maintenance needs. Recommended projects do not include telecommunications, furniture, window treatment, space change, program issues, relocation, swing space, or costs that could not be identified or determined from the survey and available building

Individual projects and costs noted herein may be impacted by new construction materials or methods, agency projects, and pending or proposed Capital Improvement Projects (CIP).

This report was created under the authority found in NRS 341.201 by the State Public Works Board and should be utilized as a planning level document.

REPORT DEVELOPMENT:

State Public Works Board | 515 E. Musser Street, Suite 102 | (775) 684-4141 voice
Facilities Condition Analysis | Carson City, Nevada 89701-4263 | (775) 684-4142 facsimile

Marlette Lake Water System Office Site – FCA Site #9899
Description: View of the site looking east.

Water Master House Shed – FCA Building #2498
Description: Exterior of the building.

Marlette Lake Office / Storage Building – FCA Building #2488
Description: Exterior of the building.

Marlette Lake Office / Storage Building – FCA Building #2488
Description: Interior of the building.

Lakeview House – FCA Building #2484
Description: Exterior of the house.

Lakeview House – FCA Building #2484
Description: Main entry stairway to residence.

Lakeview House – FCA Building #2484
Description: Interior of the house / living room and entrance.

Lakeview House – FCA Building #2484
Description: Single hung window assembly.